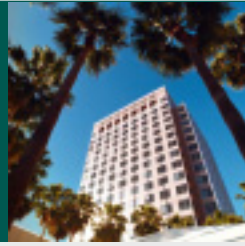




October 4, 2004

# SELLING GREEN POWER AND RECs IN TODAY'S MARKETS

# WHO IS CALPINE?

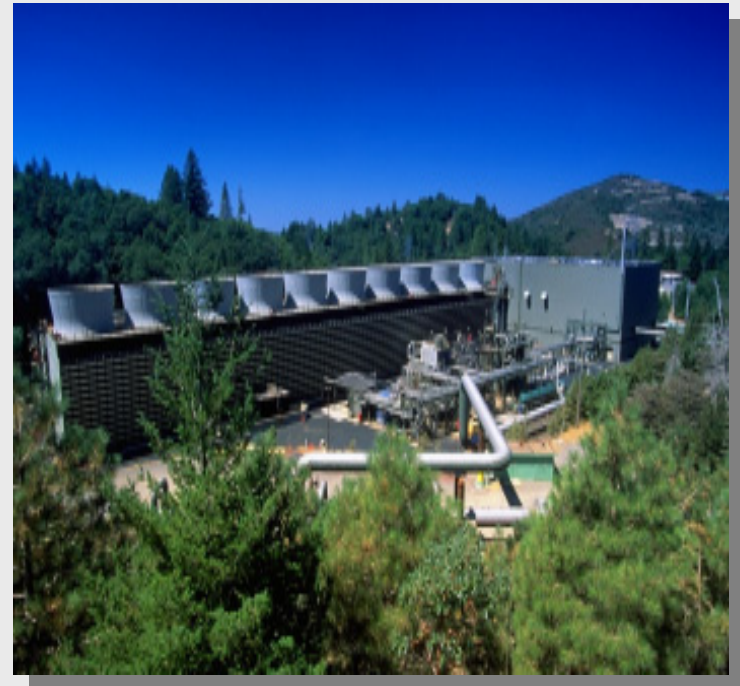


- The Leader in Independent Power Production - Calpine is “Repowering America” to Meet the Needs of an Economy that Demands More and Cleaner Sources of Electricity
- Calpine Generates Power at Plants in the United States, Canada, the United Kingdom, and (Soon) in Mexico
- Calpine Operates Nearly 100 Highly Efficient Natural Gas-Fired Combined-Cycle, Peaking, and Geothermal Power Plants Producing 26,300 mw
- A Total Energy Solutions Provider with Products and Services that Include: Wholesale and Retail Power; Renewable Energy; Scheduling Coordination Services, Energy Management Services; and On-Site Utilities



# CALPINE GEOTHERMAL OPERATIONS

- Calpine is the Largest Geothermal Power Producer in the U.S.
- Calpine Operates 19 Geothermal Power Plants at The Geysers in Northern California, with a Combined Output of More than 750 Megawatts
- Calpine has Plans to Develop Additional Geothermal Power Plants at The Geysers and in the Glass Mountain Geothermal Area Near the California-Oregon Border



# GEOHERMAL ENERGY AND RECs



Of the 6.5 Million Renewable Energy Credits / Tradable Renewable Certificates / Green Tickets Produced at Calpine's Geysers Power Plants Each Year, Currently:

- ~2.5 Million are Sold "Bundled" with the Green Energy
- ~800,000 are Sold as "Unbundled" RECs
- Therefore, ~3.2 Million are Still Available or "For Sale"
- In 2004 Calpine has Responded to Approximately a Dozen RFPs / RFOs / RFBs for Renewable Energy and has Reviewed and Elected Not to Respond to Another Dozen or So Across the U.S.
- Calpine has Also Worked with a Number of Brokers and Suppliers to Provide RECs / TRCs to Consumers Across the U.S.



# PROBLEMS SELLING RENEWABLE ENERGY / RECs

From a Generator's Perspective, Some of the Problems Calpine Sees in Selling Renewable Energy / RECs:



- Differing Definitions and Dates, Defining Renewable
- Transmission Constraints for Delivering Green Energy
- Differing Forms for RECs, Certificates, Attestations; and What They Convey
- Differing "Vintage" or "Lifespan" Criteria





## Dates

- Green E New Renewable: Post January 1, 1999
- California Energy Commission: Post September 26, 1996; January 1, 2002
- Texas New (Renewable) Facility: After September 1, 1999
- Federal RFP: Renewable Only if Installed After 1990

## Vintage

- Green E: Current Year, First Three Months of Following Year, or Last Six Months of Previous Year
- Texas: 3 Years



### Transmission

- Pacificorp, in a Transmission Constrained Area, Wouldn't Allow "RECs Only" to be Bid, but Did Consider RECs Bundled with Local Brown Energy
- Projected Line Losses from Glass Mountain Over Multiple Transmission Owners' Interconnections (BPA, WAPA, CAISO / PG&E)

### QF / Utility REC Ownership

- Unclear Ownership of Qualifying Facility RECs, Being Decided State-by-State



# ENCOURAGING DEVELOPMENTS



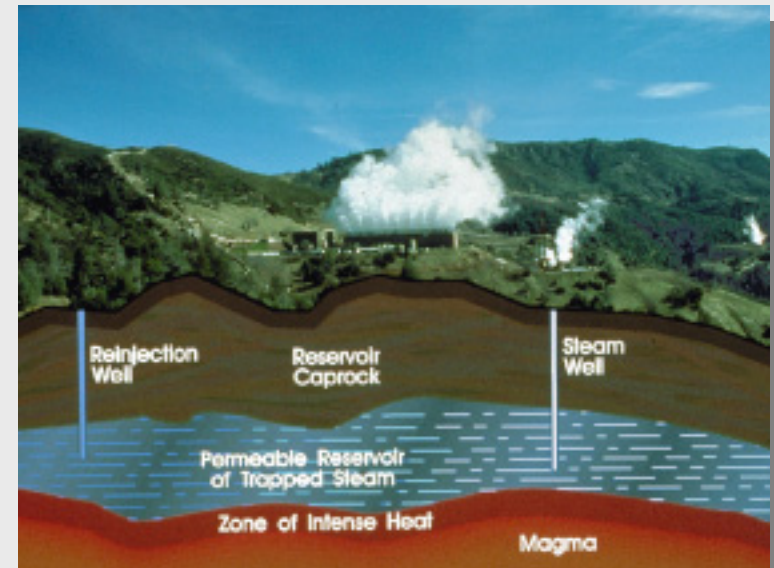
- More Interest and Activity in Promoting and Marketing Renewables this Past Year
- Progress at Federal Level and in Various States Defining What are Renewable Resources and Setting Renewable Portfolio Standards
- Acceleration of Portfolio Standard Timetables in New York, California, and Elsewhere
- More Standardization or Globalization of Guidelines, Such as the Western Governor's Association's Development of the Western Renewable Energy Generation Information System (WREGIS) for Issuing and Tracking RECs Throughout the Western Interconnection (Including Canada) and with Other Compatible Systems





# CONCLUSION

- The Market for Renewable Energy Continues to Grow Throughout the U.S.
- Several Hurdles Still Remain Before the Green Energy and REC / TRC Markets are Fully Open and Robust
- Federal, State, and Other Organizations are Showing Flexibility and Willingness to Encourage the Development and Use of Renewable Energy



# REFERENCES

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- Green E's TRC Standard:  
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